

What is claimed is:

1. A method of forming induction coil, comprising the steps of:

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preparing a predetermined metal material and processing it to form a long flat strip having a beginning section, a plurality of middle sections, and an end section, all of which being integrally and 10 sequentially connected to one another;

having said beginning section, said middle sections, and said end section of said flat strip subjected to necessary surface isolating treatment; and

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sequentially folding said flat strip at joints of two said middle sections that are adjacent to one another, so that a folded section is formed at each said joint and said middle sections are stacked one by one while 20 being folded to form a frame-type multi-layered coil structure with said folded sections on two adjacent layers of said stacked middle sections being circumferentially staggered by a predetermined angle without locating on the same vertical axis.

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2. The method of forming induction coil as claimed in

claim 1, wherein said metal material is pressed to form said long flat strip having said sequentially arranged beginning section, middle sections, and end section.

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3. The method of forming induction coil as claimed in claim 1, wherein said metal material is cut to form said long flat strip having said sequentially arranged beginning section, middle sections, and end section.

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4. The method of forming induction coil as claimed in claim 1, wherein said metal material is etched to form said long flat strip having said sequentially arranged beginning section, middle sections, and end section.

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5. The method of forming induction coil as claimed in claim 1, wherein said metal material is cast to form said long flat strip having said sequentially arranged beginning section, middle sections, and end section.

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6. The method of forming induction coil as claimed in claim 1, wherein said middle sections are in any shape that allows said middle sections to be sequentially folded and stacked to form said frame-type coil.

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7. The method of forming induction coil as claimed in

claim 1, wherein each layer of said multi-layered coil structure comprises the same said middle section or different ones of said middle sections.

5 8. The method of forming induction coil as claimed in claim 1, wherein each layer of said multi-layered coil structure comprises parts of some different middle sections.

10 9. The method of forming induction coil as claimed in claim 1, wherein said beginning section of said long flat strip has a lead-out position or angle that can be changed by way of changing a shape, dimensions, or a size of said middle section that is connected 15 to said beginning section.

10. The method of forming induction coil as claimed in claim 1, wherein said beginning section of said long flat strip has a lead-out position or angle that can be changed by way of changing a shape, dimensions, or a size of said beginning section. 20

11. The method of forming induction coil as claimed in claim 1, wherein said end section of said long flat strip has a lead-out position or angle that can be changed by way of changing a shape, dimensions, or 25

a size of said middle section that is connected to said end section.

12. The method of forming induction coil as claimed in
5 claim 1, wherein said end section of said long flat strip has a lead-out position or angle that can be changed by way of changing a shape, dimensions, or a size of said end section.

10 13. An induction coil structure formed from a flat metal strip having been subjected to necessary surface isolating treatment, comprising:

a beginning section;

15 a plurality of middle sections integrally and sequentially extended from said beginning section, said middle sections being sequentially folded at joints of any two adjacent ones of said middle sections, so as to form a folded section at each of said joints; said middle sectioned being stacked while being folded at said joints one by one, so as to form a frame-type multi-layered coil structure; and said folded sections on two adjacent layers being
20 25 circumferentially staggered by a predetermined angle without locating on the same vertical axis; and

an end section integrally extended from the last one of said middle sections.

5 14. The induction coil structure as claimed in claim 13, wherein said middle sections are in any shape that allows said middle sections to be sequentially folded and stacked to form said frame-type coil structure.

10 15. The method of forming induction coil as claimed in claim 13, wherein each layer of said multi-layered coil structure comprises the same said middle section or different ones of said middle sections.

15 16. The method of forming induction coil as claimed in claim 13, wherein each layer of said multi-layered coil structure comprises parts of some different middle sections.

20 17. The method of forming induction coil as claimed in claim 13, wherein said beginning section of said long flat strip has a lead-out position or angle that can be changed by way of changing a shape, dimensions, or a size of said middle section that is connected 25 to said beginning section.

18. The method of forming induction coil as claimed in
claim 13, wherein said beginning section of said long
flat strip has a lead-out position or angle that can
be changed by way of changing a shape, dimensions,
5 or a size of said beginning section.

19. The method of forming induction coil as claimed in
claim 13, wherein said end section of said long flat
strip has a lead-out position or angle that can be
10 changed by way of changing a shape, dimensions, or
a size of said middle section that is connected to
said end section.

20. The method of forming induction coil as claimed in
15 claim 13, wherein said end section of said long flat
strip has a lead-out position or angle that can be
changed by way of changing a shape, dimensions, or
a size of said end section.